

Data and Research Needs Pertaining to Air Quality



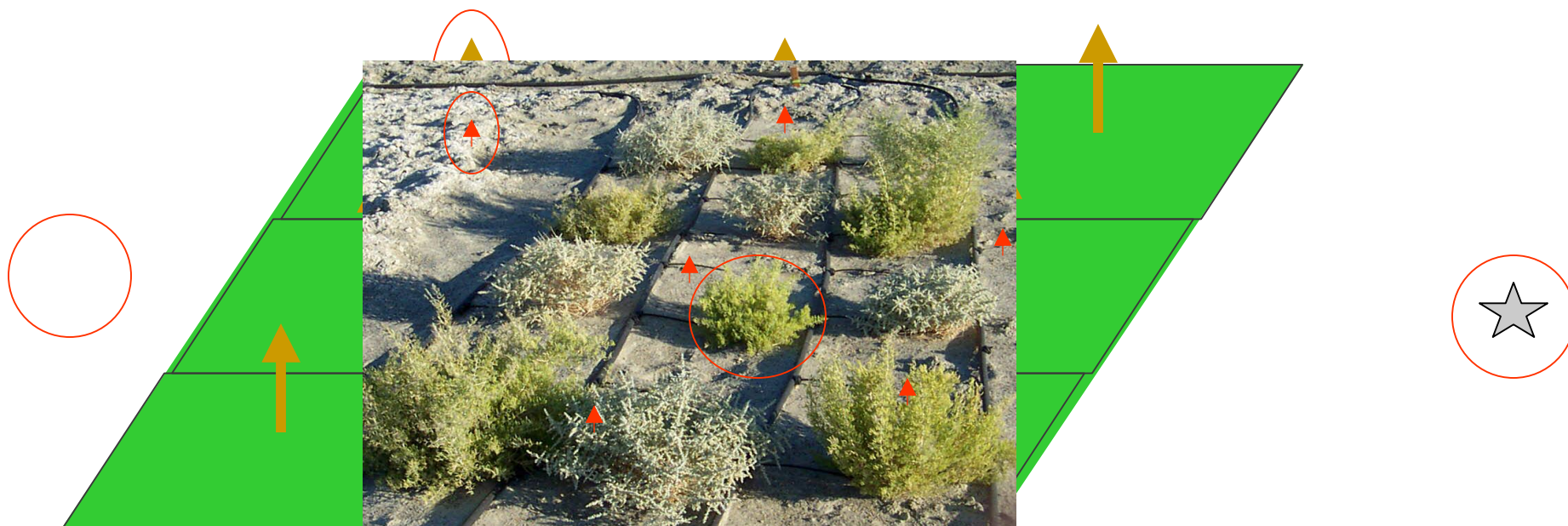
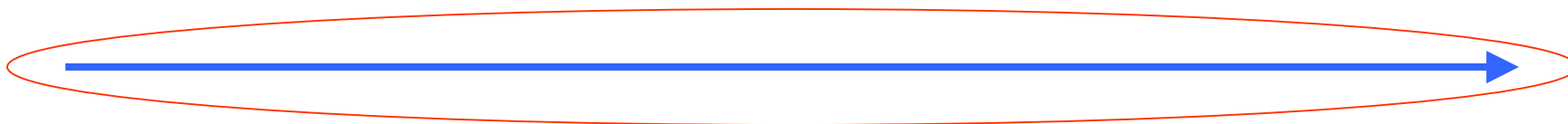
Ontario, CA
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Project Features Driving Needs for Data and Research

- **Consistency with local and state air quality agency plans and data**
- **Quantification of emissions from pollutant sources**
- **Development of air quality management technologies appropriate for Salton Sea**
- **Monitoring of project impacts to allow adaptive management**

Research and Data Categories

- **Ongoing data collection and research**
- **Short-term data and research needs**
- **Long-term data and research needs**
- **Update on PM air quality management**



Ongoing Data Collection and Research

- **ICAPCD wind-blown dust emission calculation methodology**
- **ICAPCD (data, plans, inventories, supporting information)**
 - PM10
 - 8-hr ozone
- **SCAQMD (data, plans, inventories, supporting information)**
 - Coachella Valley PM10
 - 8-hr ozone
- **Torres-Martinez Tribe**
 - Monitoring locations and air monitoring and meteorological data
 - TIP development plans and supporting information
- **Mexico**
 - Contact(s) with air quality agencies to join Salton Sea air quality working group
 - Air quality monitoring locations and air monitoring and meteorological data
 - Emissions inventories and dispersion modeling relevant to the project area

Ongoing Data Collection and Research

- **Supporting information for the 9th Circuit Court decision mandating that EPA reclassify Imperial Valley from a moderate to a serious nonattainment area (Opinion No. 01-71902, October 9, 2003)**
- **USBR/USGS**
 - Seafloor acoustic survey results
 - PM10 and meteorological data correlations for monitoring stations north and south of the Salton Sea
 - Correlation of imagery with dust storms
- **DRI**
 - Wind tunnel emissivity tests
 - Wind tunnel correlation with PI-SWERL
- **Meteorological and ambient air quality data base**

Ongoing Data Collection and Research

■ Other relevant studies

- Regional meteorological, ambient air quality, and inhalation related health studies
- Odor emission sources by season
- Control/reduction of emissions from heavy-duty diesel and other construction equipment
- Control/reduction of emissions from other relevant sources

Short-term Data and Research Needs

■ Meteorology

- 10-meter meteorological monitoring data at identified CIMIS stations and correlations with CIMIS 2-meter meteorological data
- Development of wind fields for the Salton Sea watershed area, and the current areal extent of the Sea

Short-term Data and Research Needs

■ Particulate Matter emissions and control

- Sediment sampling and analysis for compounds of potential concern that could become windborne
- Health risk analysis for air pathway
- Seasonal crust conditions
- Crusting and emissions estimation tools refinement
- Effectiveness/feasibility screening of potential dust control measures (DCMs)
- Native vegetation and growth requirements
- Develop of feasible DCMs for incorporation into alternatives
- Develop implementation plan
- Develop DCM effectiveness and PM monitoring network

Long-term Data and Research Needs

- **Regulatory updates (data, plans, inventories, supporting information)**
 - PM
 - Ozone
 - Haze
 - HAPs (including aerosol particulate matter)
- **Storm chaser program**
- **Particulate Matter**
 - Playa and crusting dynamics and controlling factors
 - Dust control measure development and implementation plan refinement, including field testing and monitoring
 - Air monitoring network implementation and modeling to identify emissions and ambient air quality impacts at/from the restoration project

Air Quality Management: Performance Criteria

- Located on undeveloped playa and other potentially emissive areas
- Effective and extensive enough to achieve Plan requirements and conformity
- Water efficient
- Integrated with other Plan goals and features; e.g., avoids creation of human health and eco-toxic risks
- Cost (capital and O&M)
- Phase constructible units with creation of newly exposed playa areas
- Flexible design for adaptive management
- Each phase builds on foundation of previous phases and R&D

Preliminary options considered

- **Chemical stabilization**
- **Stabilization with irrigated vegetation**
- **Stabilization with brine**
- **Gravel blanket**
- **Seasonal surface wetting**
- **Climatic event-driven surface wetting**
- **Event-driven sprinkler irrigation**
- **Tillage**
- **Sand fences**

Preliminary AQM Concepts for Undeveloped Playa Areas

- Temporary – sand fences and surface treatment
- Permanent -- water-efficient vegetation and stabilization with brine

Features to Complement Each Concept

- Stable salt crust
- Control access

End of show